

Under the Paperwork Reduction Act of 1995, no persons are required to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 1

**Complete if Known**

Application Number	10/805,576
Filing Date	03/19/2004
First Named Inventor	Jan Weber et al.
Group Art Unit	unassigned
Examiner Name	unassigned
Attorney Docket Number	03-237



OTHER PRIOR ART—NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
<i>AP</i>	A1	RILLING, P.; POMMERSHEIM, WALTER R.; VOGT, W. "Encapsulation of cytochrome C by multilayer microcapsules. A model for improved enzyme immobilization". Journal of Membrane Science Vol. 129. 1997. pp. 283-287.	
<i>AP</i>	A2	POMMERSHEIM, RAINER; SCHREZENMEIR, JURGEN; VOGT, WALTER. "Immobilization of enzymes by multilayer microcapsules" Macromol. Chem. Phys. Vol. 195. 1994. pp 1557-1567.	

Examiner Signature	<i>H. P.</i>	Date Considered	12/13/2004
--------------------	--------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>12</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	Unassigned
		Filing Date	Filed Herewith
		First Named Inventor	Jan Weber et al.
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
Sheet 1 of 1	Attorney Docket Number	03-237	

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Class/Subclass		
I	1	6,399,528	501/80	Krell et al.	06-04-2002
	2	6,596,699	514/44	Zamora et al.	07-22-2003
	3	2002/0037383	428/36.91	Spillman	03-28-2002
	4	2002/0061326	424/424	Li et al.	05-23-2002
	5	2003/0157260	427/402	Rubner et al.	08-21-2003
	6	2003/0175517	428/402.2	Voigt et al.	09-18-2003
	7	2003/0219909	436/518	Lally et al.	11-27-2003

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T
		Office <sup>2</sup>	Number <sup>2</sup>	Class/Subclass			
R	1	WO	99/47252	B01J 13/00	Lerche Karl Heinz (DE); Max Planck Gesellschaft (DE); Baeumler Hans (DE); Voigt Andreas (DE); Caruso Frank (DE); Donath Edwin (DE); Moehwald Helmuth (DE); Sukhorukov Gleb B (RU)	09/23/1999	

Examiner Signature		Date Considered	12/13/2004
--------------------	--	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>12</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	Unassigned
		Filing Date	Filed Herewith
		First Named Inventor	Jan Weber et al.
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
		Attorney Docket Number	03-237
Sheet	2	of	2

OTHER PRIOR ART—NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>2</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>3</sup>
Q	A1	CHUNG, A.J. AND RUBNER, M.F., Methods of Loading and Releasing Low Molecular Weight Cationic Molecules in Weak Polyelectrolyte Multilayer Films, <i>Langmuir</i> 2002, 18, 1176-1183.	
	A2	FRANK CARUSO et al., Microencapsulation of Uncharged Low Molecular Weight Organic Materials by Polyelectrolyte Multilayer Self-assembly, <i>Langmuir</i> 2000, 16, 8932-8936	
	A3	GI-RA, YI et al., Ordered Macroporous Particles by Colloidal Templating, <i>Chem. Mater.</i> 2001, 13, 2613-2618	
	A4	SINGH, R.S., GRIMES, C.A., Dickey, E.C. Fabrication of nanoporous TiO <sub>2</sub> films through Bernard-Marangoni convection, <i>Materials Resources Innovations</i> , 2002, 5:178-184	
	A5	CHAN, V.Z.-H et al. Ordered Bicontinuous Nanoporous and Nanorelief Ceramic Films from Self Assembling Polymer Precursors, <i>Science</i> , Nov 26, 1999, v286, i5445, p1716-1719	
	A6	SHCHUKIN, D.G. et al., Micron-Scale Hollow Polyelectrolyte Capsules with Nanosized Magnetic Fe <sub>3</sub> O <sub>4</sub> Inside, <i>Materials Letters</i> 57, 1743-1747, 2003.	
	A7	RADTCHENKO, I.L. et al., A Novel Method for Encapsulation of Poorly Water-soluble Drugs: Precipitation in Polyelectrolyte Multilayer Shells, <i>International Journal of Pharmaceutics</i> , 242, 219-223 (2002).	
	A8	RADTCHENKO, I.L. et al., Assembly of Alternated Multivalent Ion/Polyelectrolyte Layers on Colloidal Particles. Stability of the Multilayers and Encapsulation of Macromolecules into Polyelectrolyte Capsules, <i>Journal of Colloid and Interface Science</i> , 230, 272-280 (2000)	
	A9	WHAU, WINKY L. et al., Surface-chemistry technology for microfluidics, <i>J. Micromech. Microeng.</i> 13 (2003) 272-278	
	A10	RADTCHENKO et al., Incorporation of macromolecules into polyelectrolyte micro and nanocapsules via surface controlled precipitation on colloidal particles, <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> 202 (2002) 127-133.	

Examiner Signature		Date Considered	12/13/2004
--------------------	---	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	Unassigned
		Filing Date	Filed Herewith
		First Named Inventor	Jan Weber et al.
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
		Attorney Docket Number	03-237
Sheet	3	of	3

	A11	MOYA, S. et al., Polyelectrolyte multilayer capsules templated on biological cells: core oxidation influences layer chemistry, <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> 183-185 (2001) 27-40.
	A12	ANTIPOV, ALEXEI A. ET AL., Polyelectrolyte multilayer capsule permeability control, <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> 198-200 (2002) 535-541
	A13	QIU, XINGPING et al., Studies on the Drug Release Properties of Polysaccharide Multilayers Encapsulated Ibuprofen Microparticles, <i>Langmuir</i> 2001, 17, 5375-5380
	A14	ANTIPOV, ALEXEI A. et al., Sustained Release Properties of Polyelectrolyte Multilayer Capsules, <i>J. Phys. Chem. B</i> 2001, 105, 2281-2284, October 27, 2000
	A15	<a href="http://www.bmed.mcgill.ca/tabrizian/People_pages/Benjamin2.htm#cCOMMUNICATIONS">http://www.bmed.mcgill.ca/tabrizian/People_pages/Benjamin2.htm#cCOMMUNICATIONS</a> , THIERRY, BENJAMIN, Development of new strategies for endovascular revascularization procedures, 1-7, date unknown but before the filing of this application
	A16	<a href="http://people.ccmr.cornell.edu/~uli/Pages/meso-syn.html">http://people.ccmr.cornell.edu/~uli/Pages/meso-syn.html</a> , Wiesner Research Group, Synthesis of Mesoporous Materials, 1-2, date unknown but before the filing of this application
	A17	<a href="https://engineering.purdue.edu/BME/Seminars/2003/july_14_html">https://engineering.purdue.edu/BME/Seminars/2003/july_14_html</a> , Graduate Seminar, Stent coating for drug delivery: Coating polymeric micelles using polyelectrolytes Purdue University Biomedical Engineering Seminar, 2003, 1-2, July 14, 2003
	A18	<a href="http://www.ccmr.cornell.edu/~uli/Pages/mesoporous.html">http://www.ccmr.cornell.edu/~uli/Pages/mesoporous.html</a> , Wiesner Research Group, Mesoporous Materials Through Self-Esteem, 1-2, date unknown but before the filing of this application
	A19	<a href="http://www.hmi.de/people/chemseddine/group.htm">http://www.hmi.de/people/chemseddine/group.htm</a> , 1-3, date unknown but before the filing of this application
	A20	<a href="http://web.mit.edu/newsoffice/nr/1999/gyroid.html">http://web.mit.edu/newsoffice/nr/1999/gyroid.html</a> , MIT researcher's intricate ceramic nanostructures have many potential uses, MIT News, 1-3, November 25, 1999
	A21	<a href="https://engineering.purdue.edu/ChE/Nano/NanoChmE/NSE_Topical_2001/SynthesisandCharacterizationofNovelNanoporousMaterials2.htm,2001">https://engineering.purdue.edu/ChE/Nano/NanoChmE/NSE_Topical_2001/SynthesisandCharacterizationofNovelNanoporousMaterials2.htm,2001</a> , pages 1-8
	A22	DINH, NAM et al., University of Santa Barbara, Magnetic Drug Targeting: A novel use of magnetic fields and magnetic particles to deliver therapeutic drugs at the desired time in the correct dosage to the correct site in the human body, pp 1-9, date unknown but before the filing of this application

Examiner Signature		Date Considered	12/13/2004
--------------------	--	-----------------	------------



\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>12</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>		<b>Complete if Known</b>			
		Application Number	Unassigned		
		Filing Date	Filed Herewith		
		First Named Inventor	Jan Weber et al.		
		Group Art Unit	Unassigned		
		Examiner Name	Unassigned		
Sheet	4	of	4	Attorney Docket Number	03-237

	A23	BERRY, CATHERINE C. et al., Potential Drug-Cell Delivery Routes Using Magnetic Nanoparticles, Centre for Cell Engineering, Glasgow University, European Cells and Materials Vol. 6 Suppl. 2, 2003 p 29	
	A24	<a href="http://www2.latech.edu/~ylvov/research/research.htm">http://www2.latech.edu/~ylvov/research/research.htm</a> , LVOV, YURI M., Nanofabrication of ordered multilayers by alternate absorption of polyions, nanoparticles and proteins: From planar films to microtemplates, Institute for Micromanufacturing, LaTech, Ruston, LA 71272, pp. 1-13, date unknown but before the filing of this application.	

Examiner Signature		Date Considered	12/13/2004
--------------------	---	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>12</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.